SOUTHWEST FISHERIES SCIENCE CENTER
FIRST QUARTER REPORT-FY 2002
For the Period October 1 - December 30, 2001

Submitted by: John Hunter, Division Director, Fisheries Resources Division

Title of Accomplishment or Milestone: Complete CalCOFI Manta net time series, including Data Reports and Atlas 35.

Current Status: Completed.

Background Information: Harvest of nearshore fishes off California, particularly species in the recently expanded live-fish fishery, has impacted important commercial and recreational species such as cabezon, sheephead, lingcod, greenlings, and rockfishes. The larvae of many of these stocks live exclusively in surface waters and are undersampled by oblique net tows. Life history information and fishery-independent larval abundance indices are badly needed for the development of management strategies for these stocks. Surface (neuston) tows taken with a Manta net became part of the station protocol for CalCOFI surveys in December 1978 and have continued to date. These samples are the basis for the milestone.

Purpose of Activity: To complete identification of the fish eggs and larvae from Manta net tows taken on all CalCOFI survey cruises from 1978 to the present, to enter this data into the CalCOFI Ichthyoplankton Data Base, edit the data, produce data reports for each CalCOFI survey year, and to prepare a CalCOFI atlas summarizing the distribution and abundance of eggs and larvae from Manta tows.

Description of Accomplishment and Significant Results: Identification of all fish eggs and larvae from 7,280 Manta net samples taken on CalCOFI surveys from 1978 to the present was completed. A data base for these identifications was completed and data report manuscripts were completed for each of the 20 survey years. Reports for the first seven years are in press and the others will be published when funds become available. A manuscript for CalCOFI Atlas 35 was completed and is in press. This atlas summarizes the distribution and abundance of the larvae of 88 fish taxa and the eggs of Pacific sardine, northern anchovy, and Pacific saury. The information is presented in the context of ocean climate events (e.g., El Niño, El Niña, regime shift) that have occurred since 1975.

Significance of Accomplishment: Fishery-independent time series of larval abundance, now available for many of the heavily impacted nearshore fishery species, will be used in population models designed to estimate biomass of target species. The larval time series data is used to ground-truth catch-at-age data from the fishery. These resulting biomass estimates are used by fishery managers to set harvest guidelines and establish conservation zones. Also, the data will be used by marine scientists and educators along the entire west coast as resource information for academic courses, research projects, and environmental impact studies.

Problems: None

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